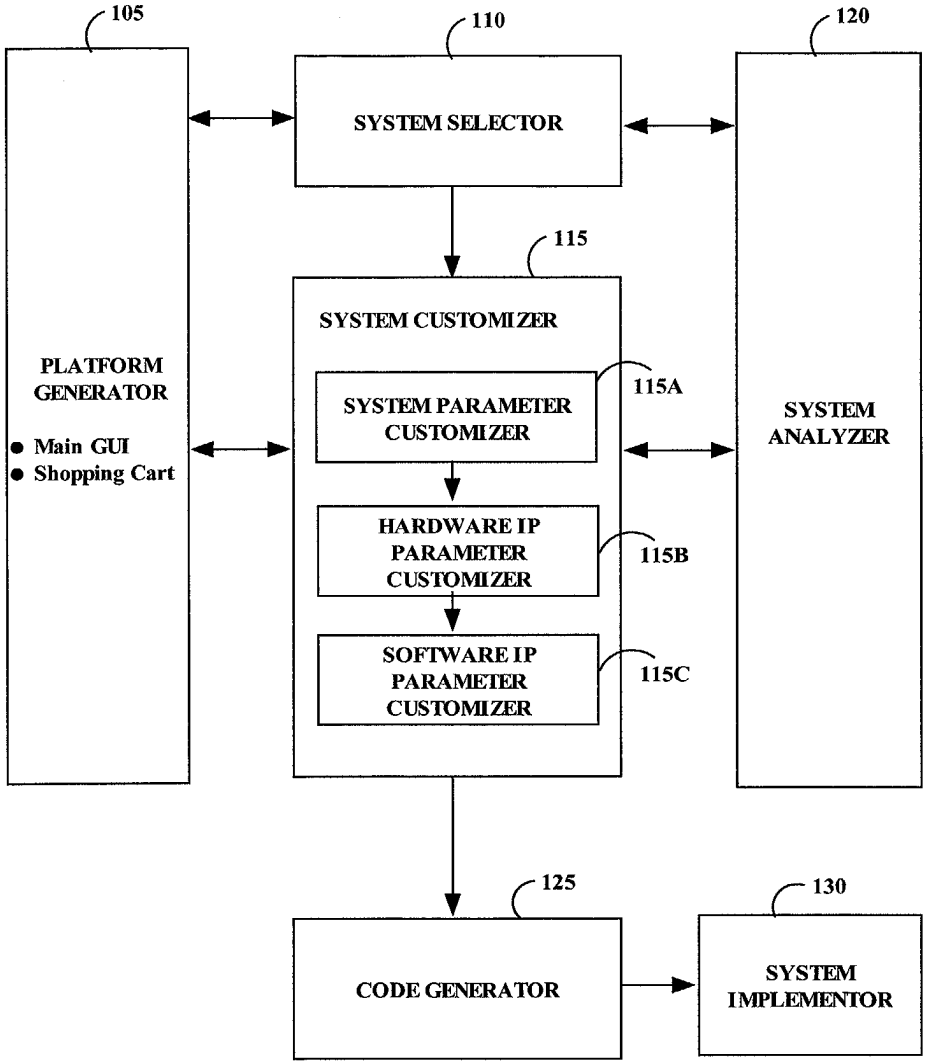

105
110
120
SYSTEM SELECTOR
115
SYSTEM CUSTOMIZER
PLATFORM GENERATOR
Main GUI
Shopping Cart
SYSTEM PARAMETER CUSTOMIZER
115A
SYSTEM ANALYZER
HARDWARE IP PARAMETER CUSTOMIZER
115B
SOFTWARE IP PARAMETER CUSTOMIZER
115C
125
130
CODE GENERATOR
SYSTEM IMPLEMENTOR

FIG. 1

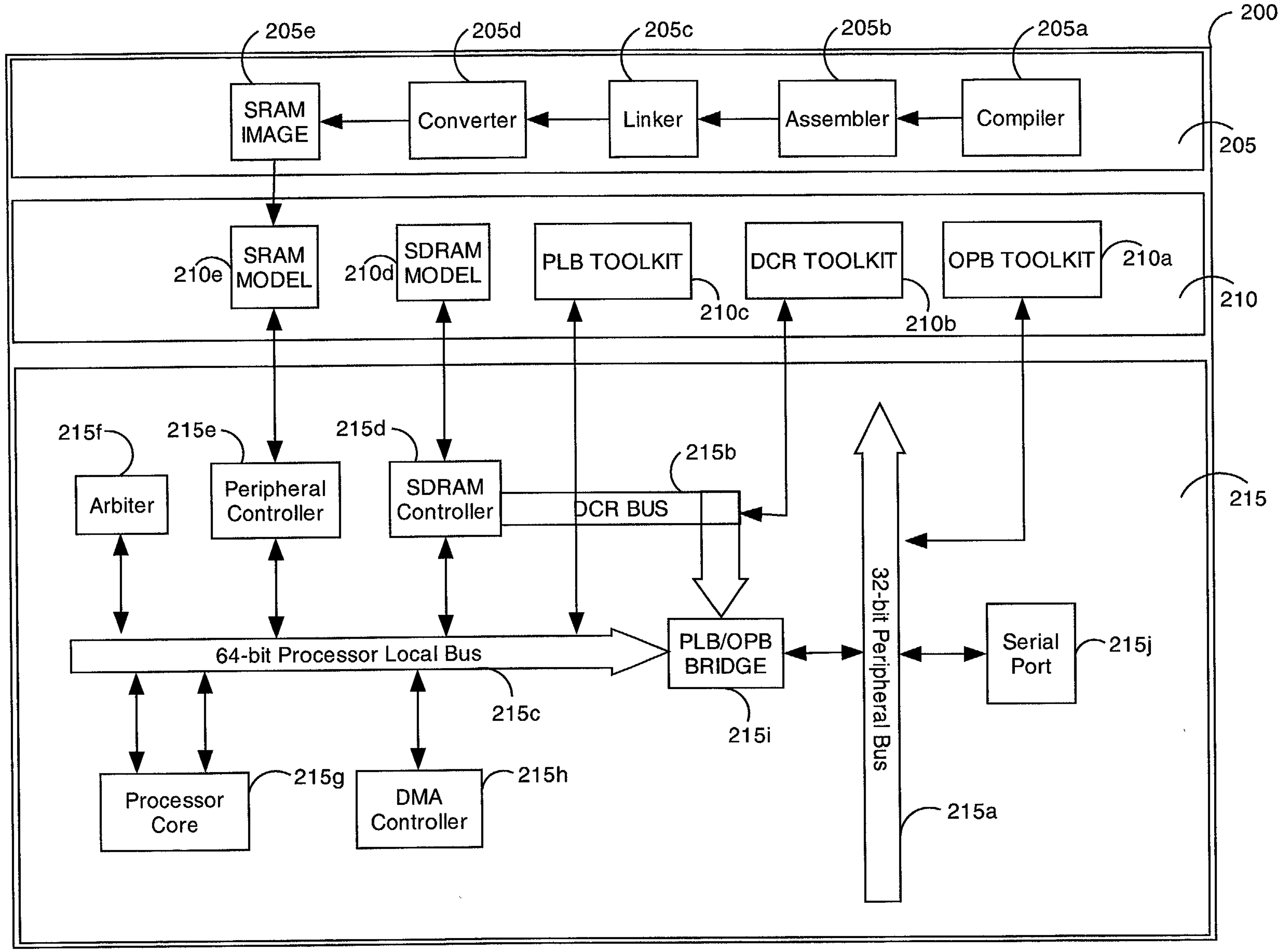

200
205
205a
205b
205c
205d
205e
Compiler
Assembler
Linker
Converter
SRAM IMAGE
210
210a
210b
210c
210d
210e
OPB TOOLKIT
DCR TOOLKIT
PLB TOOLKIT
SDRAM MODEL
SRAM MODEL
215
215a
215b
215c
215d
215e
215f
215g
215h
215i
215j
Arbiter
Peripheral Controller
SDRAM Controller
DCR BUS
64-bit Processor Local Bus
PLB/OPB BRIDGE
32-bit Peripheral Bus
Serial Port
Processor Core
DMA Controller

FIG. 2

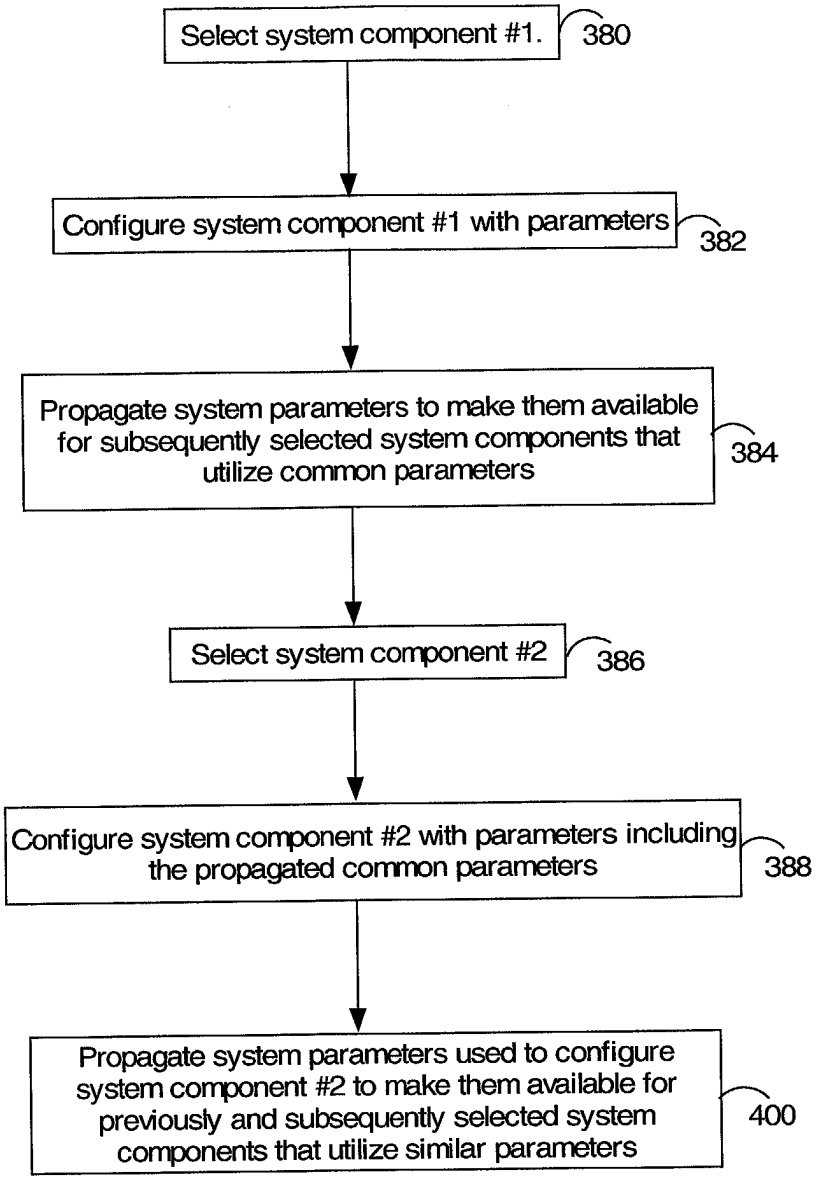

Select system component #1.
380
Configure system component #1 with parameters
382
Propagate system parameters to make them available for subsequently selected system components that utilize common parameters
384
Select system component #2
386
Configure system component #2 with parameters including the propagated common parameters
388
Propagate system parameters used to configure system component #2 to make them available for previously and subsequently selected system components that utilize similar parameters
400

FIG. 3

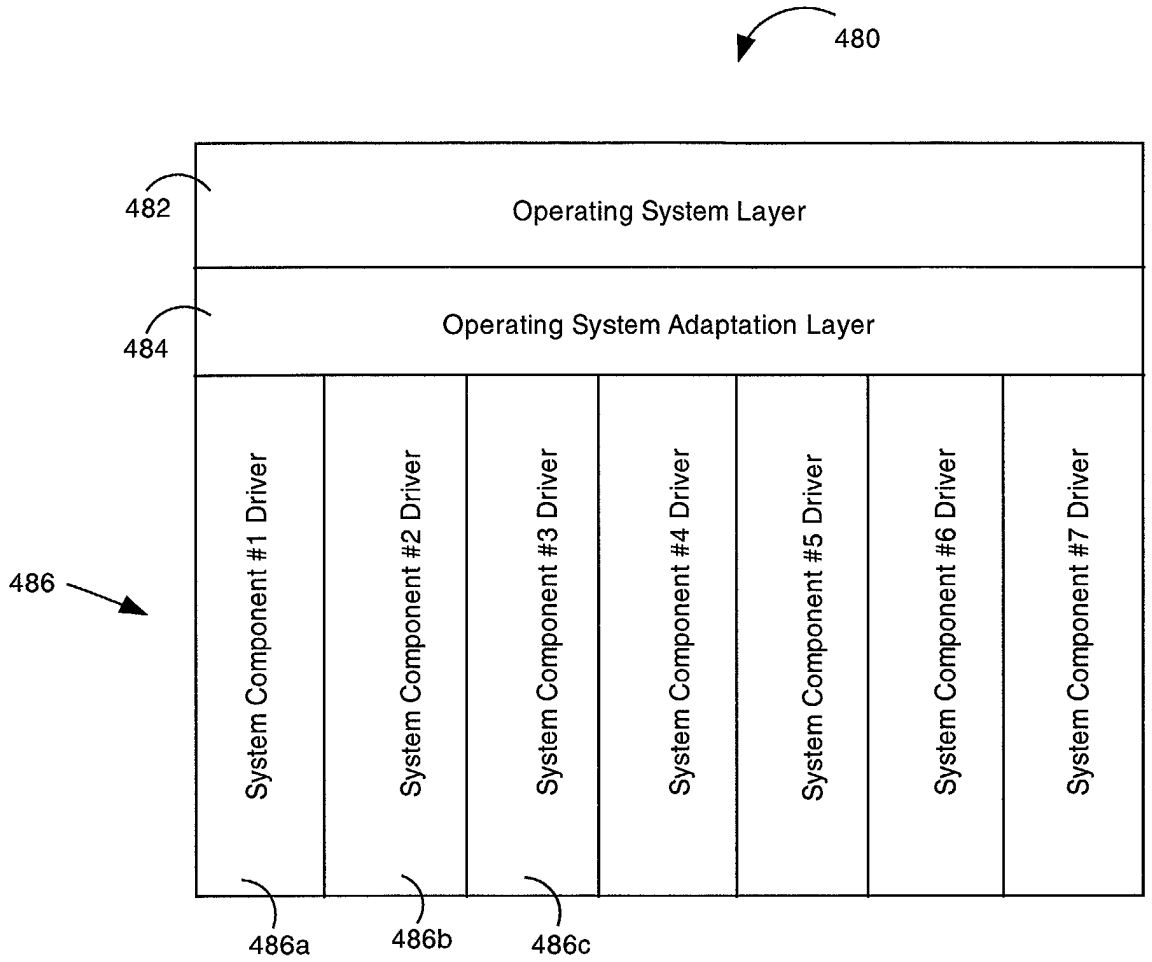

480
482
Operating System Layer
484
Operating System Adaptation Layer
486
System Component #1 Driver
System Component #2 Driver
System Component #3 Driver
System Component #4 Driver
System Component #5 Driver
System Component #6 Driver
System Component #7 Driver
486a
486b
486c

FIG. 4

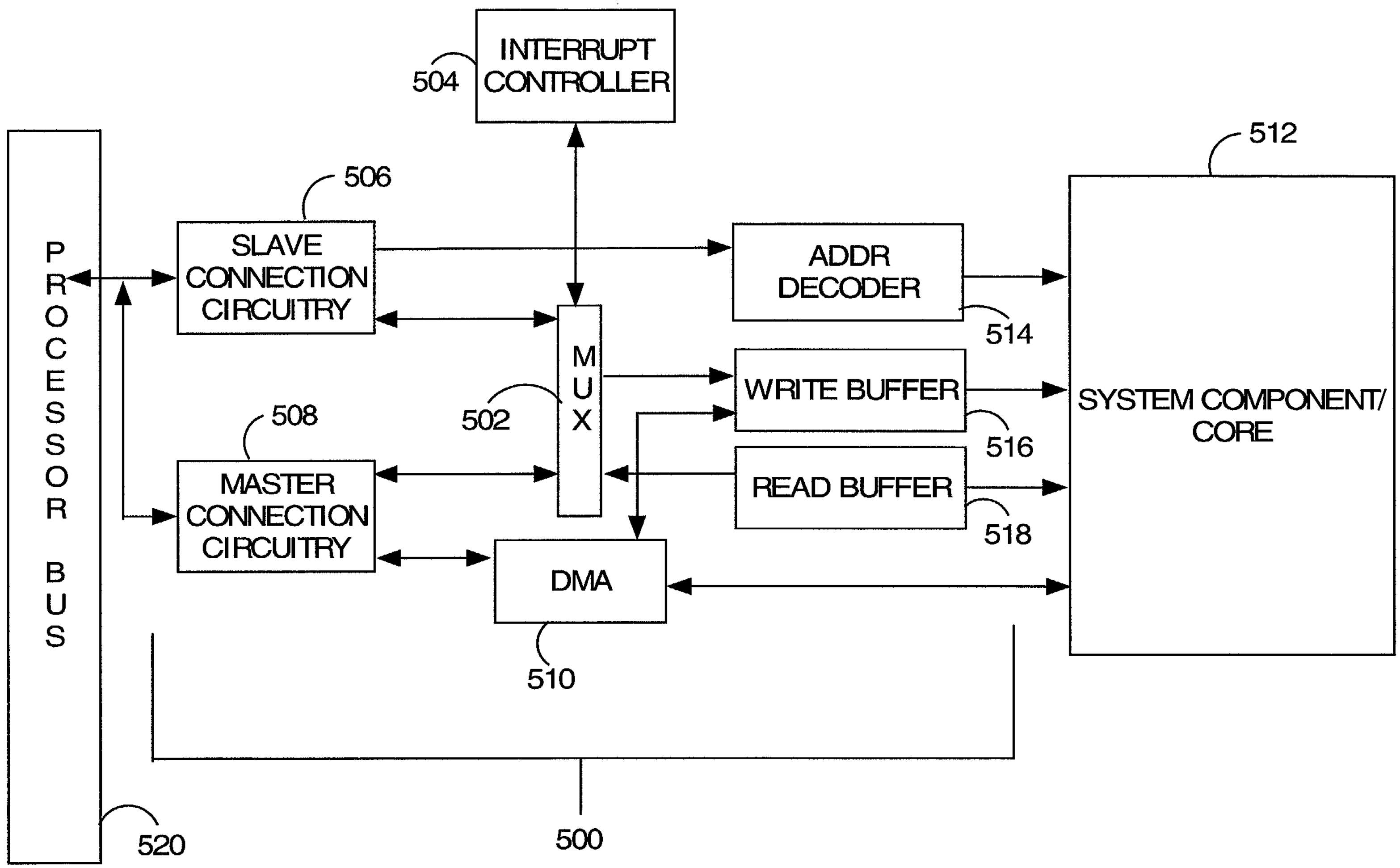
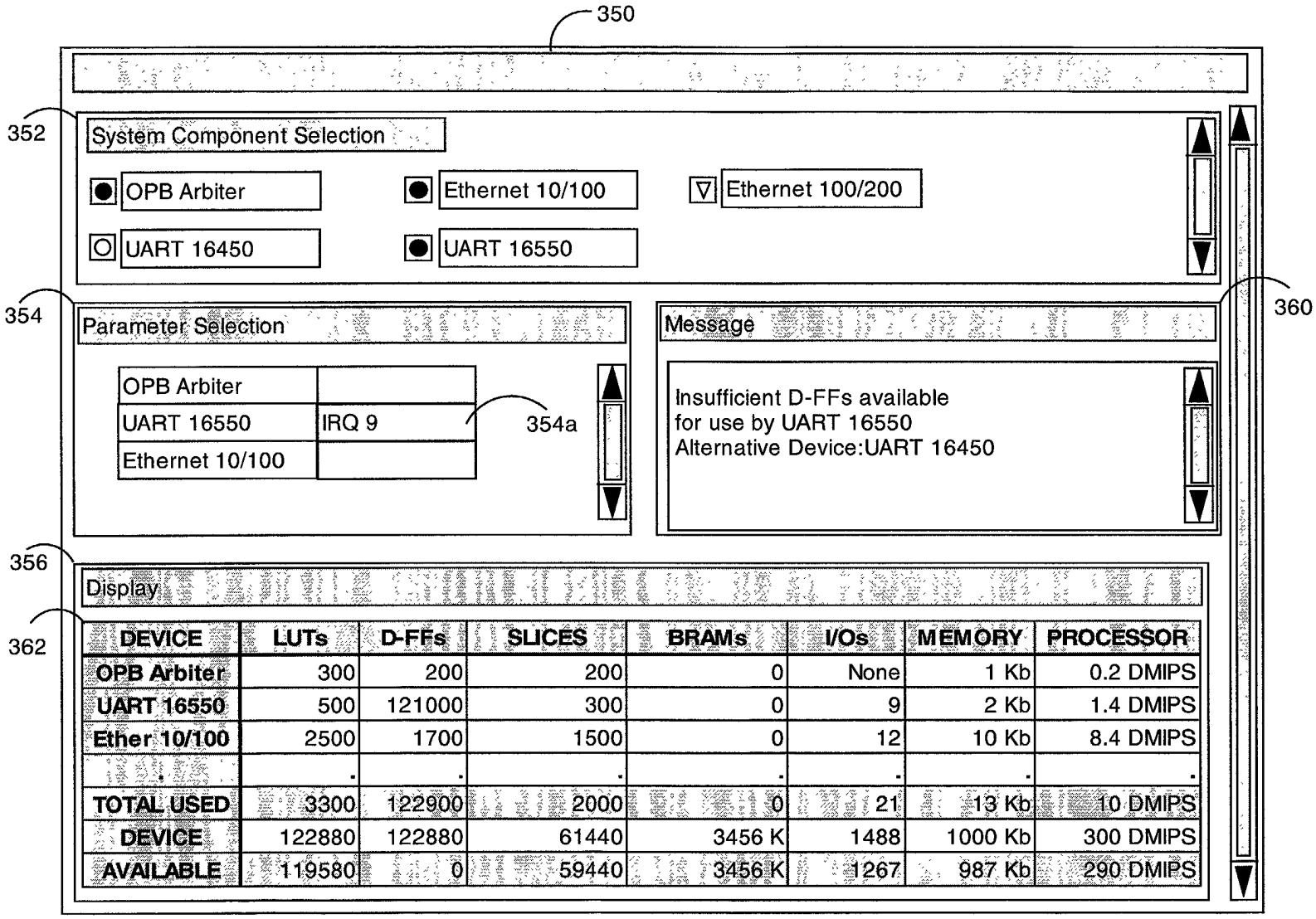

INTERRUPT CONTROLLER
504
512
506
SLAVE CONNECTION CIRCUITRY
ADDR DECODER
514
P R O C E S S O R B U S
M U X
WRITE BUFFER
SYSTEM COMPONENT/ CORE
502
508
516
MASTER CONNECTION CIRCUITRY
READ BUFFER
518
DMA
510
520
500

FIG. 5



DEVICE	LUTs	D-FFs	SLICES	BRAMs	I/Os	MEMORY	PROCESSOR
OPB Arbiter	300	200	200	0	None	1 Kb	0.2 DMIPS
UART 16550	500	121000	300	0	9	2 Kb	1.4 DMIPS
Ether 10/100	2500	1700	1500	0	12	10 Kb	8.4 DMIPS
.	.	.	.	.	.	.	.
TOTAL USED	3300	122900	2000	0	21	13 Kb	10 DMIPS
DEVICE	122880	122880	61440	3456 K	1488	1000 Kb	300 DMIPS
AVAILABLE	119580	0	59440	3456 K	1267	987 Kb	290 DMIPS

FIG. 6